

REMARKS

Reconsideration of the above-captioned patent application is respectfully requested in view of the foregoing amendments and the following remarks.

By the foregoing amendments, claims 1-5, and 7-9 have been amended, and claims 13-17 have been added. Thus, claims 1-17 currently are pending and are subject to examination in the above-captioned patent application. No new matter is added and the foregoing amendments, and these amendments are fully supported by the specification.

In the Office Action mailed July 15, 2004, the Examiner rejected claims 1-12 under 35 U.S.C. § 103(a), as allegedly being rendered obvious by U.S. Patent No. 4,517,495 to Piepmeier in view of U.S. Patent No. 3,904,849 to Lucero *et al.* ("Lucero"). To the extent that these rejections remain applicable in view of the foregoing amendments, Applicants respectfully traverse these rejections, as follows.

In order for the Examiner to establish a prima facie case for obviousness, three (3) criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to those of ordinary skill in the art, to modify the primary reference as proposed by the Examiner. Second, there must be a reasonable expectation of success in connection with the Examiner's proposed combination of the references. And third, the prior art references must disclose or suggest all of the claim limitations. MPEP 2143. In addressing the Examiner's obviousness rejection, Applicants have amended independent claim 1 to more clearly describe the concept that the claimed system is a "thermoregulated system."

Specifically, Applicants have amended independent claim 1 to describe a sample processing system for a plasma spectrometer for analyzing a viscous sample and/or a sample that is insoluble at room temperature, comprising “means for detecting a temperature of air adjacent to at least one of the first pump tubing and the second pump tubing, and means for heating the system, wherein the means for heating the system is configured to apply a first amount of heat to a first portion of the system based at least on the temperature of the air adjacent to the at least one of the first pump tubing and the second pump tubing.” For example, as set forth in new dependent claim 13, the first portion of the system may comprise the pump.

Applicants also have amended dependent claim 2 to describe that the system further may comprise “means for detecting a temperature of the transfer tube, wherein the means for heating the system is further configured to apply a second amount of heat to a second portion of the system based at least on the temperature of the transfer tube.” For example, as set forth in new dependent claim 14, the second portion of the system may comprise the transfer tube. Moreover, Applicants have amended dependent claim 3 to describe that the system further may comprise “means for detecting a temperature of air inside the thermoregulated box, and wherein the means for heating the system is further configured to apply a third amount of heat to a third portion of the system based at least on the temperature of the air inside the thermoregulated box.” For example, as set forth in new dependent claim 16, the third portion of the system may comprise the thermoregulated box.

In the Office Action mailed July 15, 2004, the Examiner asserts that Piepmeier discloses a thermoregulated system, as set forth in original, independent claim 1.

Specifically, the Examiner asserts that Piepmeier discloses that in order to reduce sample aerosol condensation in a connecting tube 24, a heating coil may be wrapped around connecting tube 24, and heat may be applied to the sample via the heating coil. The Examiner asserts that this heating coil makes the system described in Piepmeier a "thermoregulated system," as set forth in original, independent claim 1.

As set forth above, Applicants have amended independent claim 1. Moreover, Applicants respectfully submit that in contrast to Applicants' claimed invention as set forth in amended independent claim 1, the system described in Piepmeier does not disclose or suggest detecting the temperature of air adjacent to any of the tubes included the system. Piepmeier also does not disclose or suggest applying a first amount of heat to at least a portion, e.g., the pump, of the system at least based on the temperature of such air.

Similarly, Lucero does not disclose or suggest these limitations which are missing from Piepmeier. Specifically, Lucero describes a system for providing controlled mixing of a first fluid (a diffusion fluid) with a second fluid (a carrier fluid). In order to precisely control the mixing of the first fluid with the second fluid, the temperature of the second fluid and the temperature of a permeation tube carrying the first fluid are regulated to achieve equilibrium. However, Lucero does not disclose or suggest detecting the temperature of air adjacent to any of the tubes included the system. Moreover, Lucero does not disclose or suggest applying a first amount of heat to at least a portion, e.g., the pump, of the system at least based on the temperature of such air.

Further, Applicants respectfully submit that Lucero is not analogous art with respect to the present invention. For example, Lucero and the present invention are not

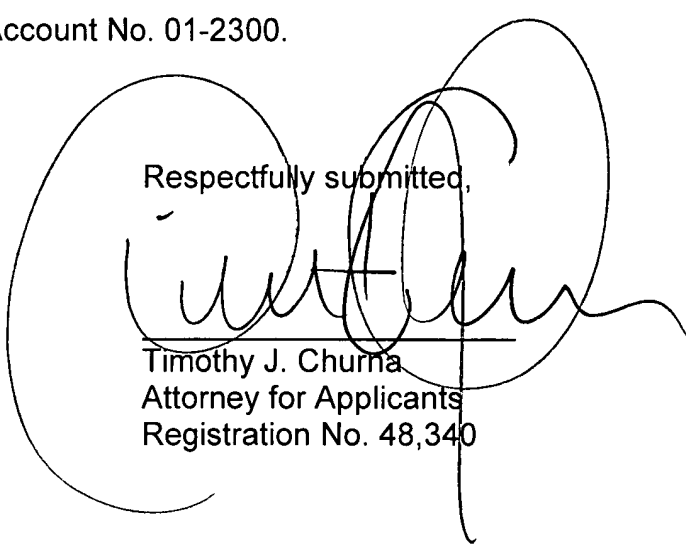
in the same technical field (electric fluid heating apparatus versus sample processing systems for a plasma spectrometer). Moreover, Lucero and the present invention do not address similar problems (the problems associated with maintaining fluid equilibrium when mixing together two fluids are substantially different than the problems associated with analyzing viscous samples and/or samples that are insoluble at room temperature). Therefore, Applicants respectfully request that the Examiner withdraw the rejection of independent claim 1.

Claims 2-12 depend from allowable independent claim 1. Therefore, Applicants respectfully request that the Examiner also withdraw the rejection of claims 2-12.

CONCLUSION

Applicants respectfully submit that the above-captioned patent application is in condition for allowance, and such action is earnestly solicited. If the Examiner believes that an in-person or telephonic interview with Applicants' representatives would expedite the prosecution of the above-captioned patent application, the Examiner is invited to contact the undersigned attorney of records. Applicants are enclosing a Petition for a One-Month Extension of Time to Respond, and a check in the amount of \$110 covering the requisite large entity fee for such an extension, with this submission. Nevertheless, in the event of any variance between the fees determined by Applicants and those determined by the U.S. Patent and Trademark Office, please charge any such variance to the undersigned's Deposit Account No. 01-2300.

Respectfully submitted,



Timothy J. Churnia
Attorney for Applicants
Registration No. 48,340

Customer No. 004372**ARENT FOX, PLLC**

1050 Connecticut Ave., N.W., Suite 400

Washington, D.C. 20036-5339

Telephone No. (202) 715-8434

Facsimile No. (202) 638-4810

GEO/TJC:klf